LISTING OF CLAIMS

1. (Original) A method of fabricating an anti-reflective layer of a dual damascene device in a chemical vapor deposition chamber, the method comprising the steps of:

forming a first layer of dielectric that is to be patterned;

forming an anti-reflective layer over the first layer, wherein the anti-reflective layer is substantially nitrogen-free and comprises between about 20% and 80% oxygen; and

depositing a photoresist that contacts the anti-reflective layer.

2. (Original) The method of claim 1 wherein forming an anti-reflective layer comprises introducing gas or liquid sources of carbon, hydrogen, silicon, and oxygen.

3. (Original) The method of claim 2 wherein oxygen source comprises elemental oxygen, carbon monoxide, or carbon dioxide.

4. (Original) The method of claim 2 wherein forming an anti-reflective layer comprises introducing silane at a flow rate of from 0.01sccm to 0.5 sccm per square centimeter of the surface of the anti-reflective layer.

5. (Original) The method of claim 2, wherein forming an anti-reflective layer further comprises applying radio frequency power in the chemical vapor deposition chamber at a power intensity of from 0.05 W to 5.5 W per square centimeter of the surface of the anti-reflective layer.

6. (Original) A method for improving a damascene process for metallization, said method comprising:

forming a low-k dielectric layer on a semiconductor substrate;

forming an anti-reflective layer on said low-k dielectric layer, wherein said anti-reflective layer comprises substantially no nitrogen and comprises between about 20% and 80% oxygen;

patterning said low-k dielectric layer, thereby forming interconnect line regions in said low-k dielectric layer; and

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forming a conductive layer in said interconnect line regions.

7. (Original) The method of claim 6, wherein the forming of the anti-reflective layer is performed in a high density plasma chemical vapor deposition reactor.

8. (Original) The method of claim 6, wherein the extinction coefficient for the anti-reflective layer is between about 0 and 1.3 at 248 nm.

9. (Canceled)

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